

## REMARKS/ARGUMENTS

Claims 1-5, 7-13, 15-21, 23-29, 31 and 32 were previously pending. As noted above, claims 9-11, 13, 25-27 and 29 have been amended, claims 1-8, 12, 14, 17-24, 28 and 30 have been canceled, and claims 33-44 have been added. Support for these amendments may be found throughout the Specification.<sup>1</sup> Thus, claims 9-11, 13, 15, 16, 25-27, 29 and 31-44 are now pending.

Applicants respectfully request reconsideration of this application based on the following remarks.

### *Claim Rejections – 35 USC § 103*

Claims 1-5, 7, 9-13, 15, 17-21, 23, 26-29 and 31\* are rejected under 35 USC § 103(a) as being obvious over Le et al. (U.S. Patent No. 7,028,094) in view of Miklos (U.S. Patent No. 6,621,796).

\*Note: The paragraph containing this rejection did not explicitly identify the rejected claims. The subsequent paragraphs, however, identified the noted claims. Thus, this response is based on the subsequent paragraphs.

Initially, claims 1-5, 7, 12, 17-21 and 28 have been canceled, and thus their rejection is moot.

This rejection is respectfully traversed for the remaining claims, and there is no combination of the cited references that discloses or suggests each and every feature recited by these claims.

To establish a *prima facie* case of obviousness, all of the claimed features must be taught or suggested by the references and there must be some suggestion or motivation, in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.<sup>2</sup>

In particular, referring to independent claims 9 and 25, there is no combination of the cited references that discloses or suggests a data transfer procedure or a transmitting entity including the means for or actions of

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<sup>1</sup> See, e.g., Specification, page 16, line 15, to page 19, line 21.

<sup>2</sup> MPEP, section 2142.

discarding in-sequence any buffered data units at the higher data handling layer of the transmitting entity based on received confirmations;  
determining that the first transmission link is broken;  
purging the buffered plurality of data units at the lower data handling layer of the transmitting entity upon determining the first transmission link is broken;  
maintaining the buffering of the at least one later positioned one of the plurality of data units and an earlier positioned one of the plurality of data units at the higher data handling layer of the transmitting entity, upon determining the first transmission link is broken, if at least an implied acknowledgement of receipt of the at least one earlier positioned one of the plurality of data units in the sequence is not received from the receiving entity at the lower data handling layer of the transmitting entity;  
establishing a second transmission link between the transmitting entity and the receiving entity; and  
retransmitting, via the second transmission link, the at least one earlier positioned one of the plurality of data units and the at least one later positioned one of the plurality of data units buffered at the higher data handling layer of the transmitting entity

In contrast, Le does not relate to the recited subject matter. Instead, Le discloses that

an application layer informs the link layer (via the intermediate layers (not shown)) of the at least one condition parameter of the application layer (such as a time-out value and/or Round Trip Time RTT, etc.), initializing the retransmission scheme of the lower one of said layers by setting one or more condition parameters is performed.<sup>3</sup>

As explained by Le, Le

proposes a concept wherein at least data communication on a lower layer is capable of generating events that could trigger loss recovery at the upper layer: *In other words, if the link layer can detect that the upper layer protocol will timeout because the conditions required for auxiliary retransmission is not met, and the link layer itself cannot deliver the data by its own retransmission mechanism, then it tries to generate these auxiliary conditions.* To extend out previous example, if the link layer detects that it has only 2 segments in its queue, then it can generate 3 duplicate acknowledgements directly to the sender if it detects loss and try to avoid loss. If these 3 duplicate acknowledgements are received appropriately in time, then the TCP sender will not have to timeout. However, if this was not done, the

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<sup>3</sup> Le, col. 8, lines 40-46.

only way out for TCP sender would be to timeout and then retransmit.  
(emphasis added)<sup>4</sup>

In other words, the link layer of Le generates conditions to avoid transport layer timeouts. This disclosure of Le has nothing to do with the presently recited subject matter.

Le completely fails to disclose or suggest the recited actions or means for discarding, determining, purging, maintaining, establishing and retransmitting, as recited above. Furthermore, Le completely fails to disclose or suggest the recited buffering at both the higher and lower data handling layers of the transmitting entity.

The addition of Miklos fails to cure the deficiencies of Le. Miklos relates to a Selective Repeat type of Automatic Repeat Request (ARQ), however, Miklos fails to specifically disclose or suggest any of the recited actions or means for discarding, determining, purging, maintaining, establishing and retransmitting, as recited above. Furthermore, as Miklos relates to Selective Repeat ARQ, wherein "the sender does not retransmit . . . all subsequent PDUs [after a missing or incorrectly received PDU]," Miklos teaches away from the recited actions or means for retransmitting. Thus, any attempt to modify Miklos to achieve the recited subject matter is improper.

Therefore, based on the foregoing, the Examiner is respectfully requested to withdraw the rejection of claims 1-5, 7, 9-13, 15, 17-21, 23, 26-29 and 31 under 35 USC § 103(a) as being obvious over Le et al. in view of Miklos.

#### ***Claim Rejections – 35 USC § 103***

Claims 8, 16, 24 and 32 are rejected under 35 USC § 103(a) as being obvious over Le et al. in view of Miklos and further in view of Lohtia (U.S. Patent Pub. No. 2002/0082033). Applicants respectfully traverse this rejection.

Initially, claims 8 and 24 have been canceled, and thus their rejection is moot.

Applicants respectfully traverse this rejection, as any combination of Le, Miklos and Lohtia fails to disclose or suggest the recited subject matter. In particular, claims 16 and 32 respectively depend from independent claims 9 and 25, which are believed to be patentable over Le and Miklos as noted above. Further, Lohtia fails to address the above-noted failures of Le and

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<sup>4</sup> *Id.* at col. 7, lines 34-49.

Miklos. Thus, claims 9 and 25 are also non-obvious and patentably distinguishable over the cited prior art references.<sup>5</sup> Further, each of these claims separately recites subject matter not disclosed or suggested by any combination of the cited references.

Therefore, based on the foregoing, the Examiner is respectfully requested to withdraw the rejection of claims 8, 16, 24 and 32 under 35 USC § 103(a) as being obvious over Le et al. in view of Miklos and further in view of Lohtia.

### *New Claims*

New claims 33-44 have been added to recite entitled subject matter. As noted above, these new claims are fully supported throughout the Specification.

Additionally, claims 33-44 are allowable, as there is no combination of the cited references that discloses or suggests the subject matter recited by these claims.

In particular, claims 41-44 respectively depend from one of independent claims 9 and 25, which are believed to be patentable over any combination of the cited references, as discussed above. Thus, for at least the same reasons, claims 41-44 are also non-obvious and patentably distinguishable over the cited prior art references.<sup>6</sup> Further, each of these claims separately recites subject matter not disclosed or suggested by any combination of the cited references.

Additionally, claims 33-40 are allowable for at least the same reasons as discussed above with respect to independent claims 9 and 25. Further, dependent claims 34-40 separately recite subject matter not disclosed or suggested by any combination of the cited references.

Therefore, Applicants respectfully request that the Examiner allow claims 33-44.

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<sup>5</sup> MPEP 2143.03.

<sup>6</sup> MPEP 2143.03.

Application No. 10/537,836  
Amendment dated April 13, 2009  
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### CONCLUSION

In light of these remarks, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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